U.S. Application No.: 10/695,981

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

- 1. (canceled).
- (currently amended): A phosphor according to claim 1 3 or 4, wherein c, d, e and f satisfy the condition 0.001≤c+d+e+f≤1.
- 3. (currently amended): A phosphor according to claim 1 or 2, for vacuum ultraviolet ray-excited light-emitting elements which comprises a compound represented by the following formula (I)':

$$\underline{M^{1}}_{1-a-b-c-d}\underline{M^{2}}_{a}\underline{M^{3}}_{b}\underline{M^{4}}_{1-e}\underline{M^{5}}_{11-f}\underline{M^{6}}_{c+d+e+f}\underline{O_{19-(b+c+f)/2}} \tag{I)}$$

wherein $\underline{M^1}$ is at least one element selected from the group consisting of La, Y and Gd, $\underline{M^2}$ is at least one element selected from the group consisting of Ce and Tb, $\underline{M^3}$ is at least one element selected from the group consisting of Ca, Sr and Ba, $\underline{M^4}$ consists of Mg and Zn, $\underline{M^5}$ is at least one element selected from the group consisting of Al and Ga, and $\underline{M^6}$ is at least one element selected from the group consisting of Mn and Eu, and a, b, c, d, e and f are numbers satisfying the conditions of $0 \le a < 1$, $0 \le b \le 0.6$, $0 \le c \le 0.5$, $0 \le d \le 0.5$, $0 \le e < 1$, $0 \le f < 1$, a + b + c + d < 1, and 0 < c + d + e + f, respectively.

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4. (currently amended): A phosphor-according to claim 1 or 2, for vacuum ultraviolet ray-excited light-emitting elements which comprises a compound represented by the following formula (I)":

$$M_{1-a-b-c-d}^{1}M_{a}^{2}M_{b}^{3}M_{1-e}^{4}M_{1-e}^{5}M_{c+d+c+f}^{6}O_{19-(b+c+f)/2}$$
 (I)"

wherein M^1 consists of La and Y, M^2 is at least one element selected from the group consisting of Ce and Tb, M^3 is at least one element selected from the group consisting of Ca, Sr and Ba, M^4 is at least one element selected from the group consisting of Mg and Zn, M^5 is at least one element selected from the group consisting of Al and Ga, and M^6 is at least one element selected from the group consisting of Al and Ga, and M^6 is at least one element selected from the group consisting of Mn and Eu, and a, b, c, d, e and f are numbers satisfying the conditions of $0 \le a < 1$, $0 \le b \le 0.6$, $0 \le c \le 0.5$, $0 \le d \le 0.5$, $0 \le c < 1$, $0 \le f < 1$, a + b + c + d < 1, and 0 < c + d + e + f, respectively.

- 5. (currently amended): A phosphor according to claim ± 3 or 24, wherein M^5 is Al.
- 6. (currently amended): A phosphor according to claim 1-which comprises a compound represented by the following formula (II):

$$(M_{1-g}^7 M_g^8)(Mg_{1-h-i}Zn_h)Al_{11-j}Mn_{i+j}O_{19-(g+j)/2}$$
 (II)

(wherein M^7 is at least one element selected from the group consisting of La, Y and Gd and M^8 is at least one element selected from the group consisting of Ca, Sr and Ba, and g, h, i and j are numbers satisfying the conditions of $0 < g \le 0.6$, $0 \le h \le 1$, $0 \le i \le 0.5$, $0 \le j \le 0.5$, $h+i \le 1$, and $0 < i+j \le 0.5$, respectively).

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7. (currently amended): A phosphor according to claim 1-which comprises a compound represented by the following formula (III):

$$(M_{l-k-m}^9 M_k^{10} E u_m) (M g_{l-n} Z n_n) A l_{11} O_{19-(k+m)/2}$$
 (III)

(wherein M^9 is at least one element selected from the group consisting of La, Y and Gd and M^{10} is at least one element selected from the group consisting of Ca, Sr, and Ba, and k, m and n are numbers satisfying the conditions of $0 < k \le 0.6$, $0 < m \le 0.4$, $0 \le n \le 1$, and k+m < 1, respectively).

8. (currently amended): A vacuum ultraviolet ray-excited light-emitting element comprising the <u>a phosphor-described in claim 1 or 2 for vacuum ultraviolet ray-excited light-emitting elements which comprises a compound represented by the following formula (I):</u>

$$M_{1-a-b-c-d}^{1}M_{a}^{2}M_{b}^{3}M_{1-c}^{4}M_{11-f}^{5}M_{c+d+c+f}^{6}O_{19-(b+c+f)/2}$$
 (I)

wherein M^1 is at least one element selected from the group consisting of La, Y and Gd, M^2 is at least one element selected from the group consisting of Ce and Tb, M^3 is at least one element selected from the group consisting of Ca, Sr and Ba, M^4 is at least one element selected from the group consisting of Mg and Zn, M^5 is at least one element selected from the group consisting of Al and Ga, and M^6 is at least one element selected from the group consisting of Mn and Eu, and a, b, c, d, e and f are numbers satisfying the conditions of $0 \le a < 1$, $0 \le b \le 0.6$, $0 \le c < 0.5$, $0 \le c < 1$, $0 \le f < 1$, a + b + c + d < 1, and 0 < c + d + e + f, respectively.

9. (new): A vacuum ultraviolet ray-excited light-emitting element comprising the phosphor of claim 2.